b) monitoring the subject's heart rate and providing a second biofeedback signal to the subject when the subject's heart rate has reached a minimum rate.

2. The broad system of claim 1 for consciously synchronizing the breathing cycle with the natural heart rate cycle:
    a) monitoring the subject's heart rate variability and providing a first biofeedback signal to the subject when the subject's heart rate has reached a maximum rate; and
    b) monitoring the subject's heart rate variability and providing a second biofeedback signal to the subject when the subject's heart rate has reached a minimum rate.
3. The method of claim 1 further comprising the use of distinctly different biofeedback signals indicating the exact moment to begin inhalation and the exact moment to begin exhalation.
4. The system of claim 2 wherein the control system is further adapted to provide distinctly different biofeedback signals indicating the exact moment to begin inhalation and exhalation.
5. The method of claim 1 further comprising the synchronization of the exact moment of inhalation very precisely with increasing heart rate and exact moment of exhalation very precisely with decreasing heart rate.
6. The system of claim 2 wherein the control system is further adapted to synchronize the exact moment of inhalation very precisely with increasing heart rate and the exact moment of exhalation very precisely with decreasing heart rate.
7. The method of claim 1 further comprising the generation of the biofeedback signal to begin inhalation of the basis of peak negative heart rate and the generation of the biofeedback signal to begin exhalation of the basis of peak positive heart rate.
8. The system of claim 2 wherein the control system is further adapted to provide the biofeedback signal to begin inhalation on the basis of peak negative heart rate and the generation of the biofeedback signal to begin exhalation of the basis of peak positive heart rate.
9. The method of claim 1 further comprising the generation of the biofeedback signal to begin inhalation on the basis of the peak negative heart rate plus

1 heart beat and the generation of the biofeedback signal to begin exhalation on the basis of peak positive heart rate minus 1 heart beat.

10. The system of claim 1 wherein the control system is further adapted to provide the generation of the biofeedback signal to begin inhalation on the basis of the peak negative heart rate plus 1 heart beat and the generation of the biofeedback signal to begin exhalation on the basis of peak positive heart rate minus 1 heart beat.

11. The method of claim 1, providing an independently programmable offset for purposes of:
    a. generating a first biofeedback signal on detection of the subject's maximum heart rate plus a programmable offset; and
    b. generating a second biofeedback signal on detection of the subject's minimal heart rate plus a second programmable offset.

12. The method of claim 11 wherein the first biofeedback signal informs the subject to begin to exhale.

13. The method of claim 11 wherein the second biofeedback signal informs the subject to begin to inhale.

14. The method of claim 11 wherein the first programmable offset is a percentage of the subject's maximum heart rate.

15. The method of claim 11 wherein the second programmable offset is a percentage of the subject's minimum heart rate.

16. The system of claim 11 wherein the control system is further adapted to provide programmability of the moment of biofeedback signal generation to inhale and exhale on the basis of the number of heart beats since negative and positive peak heart beat rates, respectively.

17. The method of claim 11 wherein the said first programmable offset is a defined number of heart beats after maximum heart rate.

18. The method of claim 11 wherein the said second programmable offset is a defined number of heart beats after minimum heart rate.

19. The system of claim 11 wherein the control system is further adapted to present to the human subject the number of heart beats since peak negative and peak positive heart beat rate such that the human subject can consciously synchronize their own inhalation and exhalation on the basis thereof, respectively.

20. The method of claim 1 further comprising the presentation of individual heart beats to the human subject in an audible, visual, or sensory format.

21. The system of claim 2 wherein the control system is further adapted to present individual heart beats to the human subject in an audible, visual, or sensory format.

22. The method of claim 1 further comprising the function of providing biofeedback signals on the basis of peak negative heart rate, peak positive heart rate, or both peak negative heart rate and peak positive heart rate.

23. The system of claim 2 wherein the control system is further adapted to provide biofeedback signals on the basis of peak positive heart rate, peak negative heart rate, or both peak positive heart rate and peak negative heart rate.

24. The method of claim 1 further comprising the function of alternately synchronizing the peak of the exhalation phase of the breathing cycle -the beginning of the inhalation phase of the breathing cycle - with the peak negative heart rate and synchronizing the peak of the inhalation phase of the breathing cycle -the beginning of the exhalation phase of the breathing cycle – with the peak positive heart rate.

25. The system of claim 2 wherein the control system is further adapted to alternately synchronize the peak of the exhalation phase of the breathing cycle -the beginning of the inhalation phase of the breathing cycle - with the peak negative heart rate, and synchronizing the peak of the inhalation phase of the breathing cycle -the beginning of the exhalation phase of the breathing cycle – with the peak positive heart rate.

26. An instructive method for bringing the heart rate variability pattern of the typical untrained subject to an adequate state of coherence such that the present invention may be effectively employed:

a) the instructive method of applying electromyographic measurement techniques for the purpose of realizing adequate coherence of the heart rate variability signal,
b) the instructive method of next applying electroencephalo-graphic measurement techniques for the purpose or

realizing adequate coherence of the heart rate variability signal.

27. The specific instructive method of claim 26, measuring the electrical potential at the location of the masseter muscle via electromyographic apparatus and instructing the subject to lower said potential while simultaneously monitoring for target coherence of the heart rate variability pattern with the present invention.

28. The specific instructive method of claim 26, next measuring the EEG potential in the high beta (26 Hertz) range and instructing the subject to lower said potential while simultaneously monitoring for target coherence of the heart rate variability pattern with the present invention.

29. The specific instructive method of claim 26, next measuring the EEG potential in the beta range (20 Hertz) and instructing the subject to lower said potential while simultaneously monitoring for target coherence of the heart rate variability pattern with the present invention.